Abstract

Query optimization is the overall process of choosing the most efficient means of executing a SQL statement. The optimizer attempts to generate the best execution plan for a SQL statement. The best execution plan is defined as the plan with the lowest cost among all considered candidate plans. SQL is a nonprocedural language, so the optimizer is free to merge, reorganize, and process in any order. The cost is a number that represents the estimated resource usage for an execution plan. The cost computation accounts for factors of query execution such as I/O, CPU, and communication. To implement query optimization methods such as Heuristic Greedy based optimization, Iterative Improvement based cost optimization and Ant Colony optimization algorithms. Show Comparison of cost, execution time and response time between Heuristic Greedy based optimization; Ant Colony Optimization and Iterative Improvement based cost optimization algorithms.

References
11. http://iridia.ulb.ac.be/~mdorigo/ACO/about.htm

**Index Terms**

Computer Science

Databases

**Keywords**

Query Optimization, Heuristic-based optimizers, Ant-Colony